Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A camera comprising:

a spatial modulation optical filter that is disposed in a viewfinder optical system for subject observation at or near a position optically equivalent to an estimated image forming plane of a photographic optical system and modulates a subject light flux entering via the photographic optical system with transmission characteristics to obtain a light flux having a predetermined spatial frequency;

a photoelectric conversion device that outputs a signal corresponding to detected light;

an optical element that guides the subject light flux having been modulated at the spatial modulation optical filter to the photoelectric conversion device; and

a focal adjustment state calculation ~~means~~device that calculates a focal adjustment state of the photographic optical system based upon the signal output from the photoelectric conversion device having received the modulated subject light flux.

2. (Original) A camera according to claim 1, wherein:

the spatial modulation optical filter modulates a light flux that passes through at least one of a plurality of divided areas within a photographic image plane defined by the photographic optical system.

3. (Currently Amended) A camera according to claim 1, further comprising:

a plurality of the spatial modulation optical filters being disposed along an optical axis of the photographic optical system, and

a light flux modulation control unit that individually controls modulation of the subject light flux and detection of the modulated light flux at the photoelectric conversion device in correspondence to each of the spatial modulation optical filters, wherein:

the focal adjustment state calculation ~~means~~device calculates the focal adjustment state of the photographic optical system based upon output signals obtained from the photoelectric conversion device in correspondence to the individual spatial modulation optical filters.

4. (Currently Amended) A camera according to claim 1, wherein:

the focal adjustment state calculation ~~means~~device calculates a light quantity of the modulated light flux detected at the photoelectric conversion device; and

the camera further comprises:

an autofocus control ~~means~~device that executes a focus operation by moving a focus lens in the photographic optical system to a target focus position set at a focus lens position at which the light quantity calculated by the focal adjustment state calculation ~~means~~device achieves a largest value.

5. (Currently Amended) A camera according to claim 3, wherein:

the focal adjustment state calculation ~~means~~device calculates a light quantity of the modulated light flux detected at the photoelectric conversion device; and

the camera further comprises:

an AF calculation unit that calculates a focus lens position at which the light quantity of the modulated light flux detected at the photoelectric conversion device achieves the largest value based upon results of a calculation executed by the focal adjustment state calculation ~~means~~device; and

an autofocus control ~~means~~device that moves a focus lens in the photographic optical system to the focus lens position calculated by the AF calculation unit.

6. (Original) A camera according to claim 3, wherein:

the spatial modulation optical filters are each constituted with a transmission liquid crystal display panel so as to modulate the subject light flux by using a display pattern having transmission characteristics with a predetermined spatial frequency displayed at the liquid crystal display panel.

7. (Original) A camera according to claim 6, wherein:

the light flux modulation control unit is capable of implementing control so as to achieve a first display state in which the display pattern having the transmission characteristics with the predetermined spatial frequency is displayed and a second display state in which the subject light flux is allowed to be transmitted; and

the camera further comprises:

a photometric operation unit that executes a photometric operation on the subject light flux based upon the signal output from the photoelectric conversion device in the second display state.

8. (Original) A camera according to claim 1, wherein:

the spatial frequency at the spatial modulation optical filter is adjustable.

9. (Currently Amended) A focal point detection device comprising:

a spatial modulation optical filter that is disposed in a viewfinder optical system for subject observation at or near a position optically equivalent to an estimated image forming plane of a photographic optical system and can be set in one of a modulation state in which a subject light flux entering via the photographic optical system is modulated with transmission characteristics to obtain a light flux having a predetermined spatial frequency and a transmission state in which the subject light flux is transmitted through;

a photoelectric conversion device that outputs a signal corresponding to detected light;

an optical element that guides the subject light flux having been modulated at the spatial modulation optical filter to a detection surface of the photoelectric conversion device and guides the subject light flux having been transmitted through the spatial modulation optical filter to the viewfinder optical system; and

a focal adjustment state calculation ~~means~~device that calculates a focal adjustment state of the photographic optical system based upon the signal output from the photoelectric conversion device having received the subject light flux that has been modulated at the spatial modulation optical filter.

10. (Original) A focal point detection device according to claim 9, wherein:

the spatial modulation optical filter modulates a light flux that passes through at least one of a plurality of divided areas within a photographic image plane defined by the photographic optical system.

11. (Currently Amended) A focal point detection device according to claim 9, wherein:

the optical element is an element, optical anisotropic characteristics of which change in correspondence to an electrical field applied to the element; and

the focal point detection device further comprises:

an optical element control ~~means~~device that controls the electrical field applied to the optical element so as to guide the subject light flux having been modulated at the spatial modulation optical filter to the detection surface of the photoelectric conversion device and to guide the subject light flux having been transmitted through the spatial modulation optical filter to the viewfinder optical system.

12. (Original) A focal point detection device according to claim 9, wherein:

a viewfinder screen of a camera is to be disposed at a position optically equivalent to the estimated image forming plane of the photographic optical system.

13. (Currently Amended) A focal point detection device according to claim 11, wherein:

the optical element is a polymer dispersion liquid crystal constituted of an isotropic polymer and an optically anisotropic liquid crystal achieving refractive indices substantially equal to each other for refracting the subject light flux when the electrical field is applied, which includes a diffraction grating having layers constituted of the isotropic polymer and layers constituted of the liquid crystal disposed in regular order at least in a focal point detection area; and

the optical element control ~~means~~device controls the electrical field applied to the diffraction grating so as to guide the subject light flux having been modulated at the spatial modulation optical filter to the detection surface of the photoelectric conversion device and to guide the subject light flux having been transmitted through the spatial modulation optical filter to the viewfinder optical system.

14. (Currently Amended) A focal point detection device according to claim 13, wherein:

the isotropic polymer layers and the liquid crystal layers that together function as the diffraction grating are constituted as a hologram formed as a result of interference occurring between parallel light entering the optical element at a right angle to the optical element and a light flux radiated from a point light source provided at a position at which the photoelectric conversion ~~element~~device is to be located.

15. (Currently Amended) A focal point detection device comprising:

a photoelectric conversion device that outputs a signal corresponding to a light quantity of detected light;

a polymer dispersion liquid crystal panel that is disposed in a viewfinder optical system for subject light flux observation at or near a position optically equivalent to an

estimated image forming plane of a photographic optical system and is constituted with an isotropic polymer and an optically anisotropic liquid crystal achieving refractive indices substantially equal to each other for refracting a subject light flux when an electrical field is applied;

a diffraction grating disposed at least at a focal point detection area of the polymer dispersion liquid crystal panel, which includes layers constituted of the isotropic polymer and layers constituted of the liquid crystal disposed in regular order and condenses the subject light flux entering the focal point detection area onto the photoelectric conversion device;

a liquid crystal panel control ~~means~~device that forms at the diffraction grating a diffraction pattern with which the subject light flux entering to the diffraction pattern is modulated with transmission characteristics to obtain a light flux having a predetermined spatial frequency by applying an electrical field with a specific pattern to the diffraction grating; and

a focal adjustment state calculation ~~means~~device that calculates a focal adjustment state of the photographic optical system based upon the signal output from the photoelectric conversion device.

16. (Currently Amended) A focal point detection device according to claim 15, wherein:

the liquid crystal panel control ~~means~~device can be set in one of an application mode in which the electrical field with the specific pattern is applied to the diffraction grating and an application OFF mode in which application of the electrical field to the diffraction grating is stopped; and

the focal point detection device further comprises:

a photometric operation unit that executes a photometric operation on the subject light flux based upon the signal output from the photoelectric conversion device in the application OFF mode.

17. (Currently Amended) A focal point detection device according to claim 15, further comprising:

a spatial modulation optical filter that is disposed further toward a subject relative to the polymer dispersion liquid crystal panel and can be set in one of a modulation state in which the subject light flux in the focal point detection area is modulated with transmission characteristics to obtain a light flux having a predetermined spatial frequency and a transmission state in which the subject light flux is transmitted through, wherein:

the liquid crystal panel control ~~means~~device can be set in one of an application mode in which the electrical field achieving the specific pattern is applied to the diffraction grating in the transmission state and an application OFF mode in which application of the electrical field to the diffraction grating is stopped in the modulation state; and

the focal adjustment state calculation ~~means~~device calculates the focal adjustment state in the photographic optical system based upon the signal output from the photoelectric conversion device in the application mode and the signal output from the photoelectric conversion device in the application OFF mode.

18. (New) A camera comprising:

a spatial modulation optical filter that is disposed in a viewfinder optical system for subject observation at or near a position optically equivalent to an estimated image forming plane of a photographic optical system and modulates a subject light flux entering via the photographic optical system with transmission characteristics to obtain a light flux having a predetermined spatial frequency;

a photoelectric conversion device that outputs a signal corresponding to detected light;

an optical element that guides the subject light flux having been modulated at the spatial modulation optical filter to the photoelectric conversion device; and

a focal adjustment state calculation means that calculates a focal adjustment state of the photographic optical system based upon the signal output from the photoelectric conversion device having received the modulated subject light flux.

19. (New) A focal point detection device comprising:

a spatial modulation optical filter that is disposed in a viewfinder optical system for subject observation at or near a position optically equivalent to an estimated image forming plane of a photographic optical system and can be set in one of a modulation state in which a subject light flux entering via the photographic optical system is modulated with transmission characteristics to obtain a light flux having a predetermined spatial frequency and a transmission state in which the subject light flux is transmitted through;

a photoelectric conversion device that outputs a signal corresponding to detected light;

an optical element that guides the subject light flux having been modulated at the spatial modulation optical filter to a detection surface of the photoelectric conversion device and guides the subject light flux having been transmitted through the spatial modulation optical filter to the viewfinder optical system; and

a focal adjustment state calculation means that calculates a focal adjustment state of the photographic optical system based upon the signal output from the photoelectric conversion device having received the subject light flux that has been modulated at the spatial modulation optical filter.

20. (New) A focal point detection device comprising:

a photoelectric conversion device that outputs a signal corresponding to a light quantity of detected light;

a polymer dispersion liquid crystal panel that is disposed in a viewfinder optical system for subject light flux observation at or near a position optically equivalent to an estimated image forming plane of a photographic optical system and is constituted with an isotropic polymer and an optically anisotropic liquid crystal achieving refractive indices substantially equal to each other for refracting a subject light flux when an electrical field is applied;

a diffraction grating disposed at least at a focal point detection area of the polymer dispersion liquid crystal panel, which includes layers constituted of the isotropic polymer and layers constituted of the liquid crystal disposed in regular order and condenses the subject light flux entering the focal point detection area onto the photoelectric conversion device;

a liquid crystal panel control means that forms at the diffraction grating a diffraction pattern with which the subject light flux entering to the diffraction pattern is modulated with transmission characteristics to obtain a light flux having a predetermined spatial frequency by applying an electrical field with a specific pattern to the diffraction grating; and

a focal adjustment state calculation means that calculates a focal adjustment state of the photographic optical system based upon the signal output from the photoelectric conversion device.